



Customer Testimonial

SHORTENING THE STORAGE LEARNING CURVE

At the University of Delaware (UD) in Newark, Delaware, the sharing of information is fundamental to the institution's mission—"to cultivate both learning and the free exchange of ideas." With more than 20,000 students and 1,150 faculty members, the University has growing amounts of information that have presented significant storage challenges for the University of Delaware's IT department.

"We are the central computing facility and we handle the university's main systems—HR, financials, and so on," says Mel Rau, Systems Manager at UD. "We also support departments across campus that have their own systems.

Many departments prefer to have their own Exchange and file servers and those need to be backed up as well." The number of servers on campus has increased tremendously over the years and Rau estimates that his group now provides backup support for 250 servers—running everything from Windows and Unix to Linux and Mac OS—with more being added frequently.

Previously, the backups were handled by four tape libraries, with one supporting the University of Delaware's IBM mainframe system and the remaining three supporting the array of servers in the data center and across the campus. As data volumes grew, the increasing workload was putting extreme strain on those systems. On one level, says Rau, his group was having trouble with the older tape drives, which tended to lock up or run inefficiently as workloads fluctuated. More broadly, the group looked toward the future and saw that it was running out of capacity, and would eventually have trouble keeping pace with the growing amounts of data. The situation was further complicated by the fact that the IT group was planning to retire its mainframe system and move to Sun Solaris servers—which meant that the University would have to completely replace its tape storage supporting that system.

"Overall, the University of Delaware wanted to re-think its approach to data back-ups and find a solution that was large, expandable, and bulletproof", says Rau.

SOUND ADVICE, SOLID SOLUTION

To identify a solution, Rau and his team worked with Open Systems Solutions, Inc. (OSSI), which assessed the situation and reviewed several possibilities. Rau's decision to collaborate with OSSI was based on his past experiences with the company. "In every interaction we have had with them over the years, they've come through for us and really bent over backwards to get us what we needed," he says.

Rau says that in UD's search for a replacement solution for its old libraries, "OSSI offered us a great deal of valuable

advice and enlightened us on options that we were unaware of." Indeed, the system that the University ultimately selected was a new product that wasn't available during the initial evaluation—but OSSI was aware of the manufacturer's product plans. That system was the Qualstar XLS Enterprise Tape Library System, configured with LTO tape drives.

"That was a new experience for us, buying a product that wasn't actually out in the market yet," says Rau. "But OSSI brought to the table all the information and expertise that we needed to make the

decision. They did the research, had a good sense of our needs, and put the two together." In particular, he says, OSSI helped the University understand how the LTO drives would help avoid the problems that had plagued UD's storage operations in the past. The company also worked with the manufacturer to come up with the right solution at the right price—a key factor for the University's budget-conscious IT group.

OSSI coordinated the implementation of the system, which involved linking the new library to disk arrays using Fibre Channel. "We try to stage everything to disk and then transfer it to tape, rather than backing servers up directly," says Rau. "It's faster and you can usually keep the tape drives running efficiently and at full speed."

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*- Melvin Rau
University of Delaware*

COST-EFFECTIVE PERFORMANCE FOR TODAY AND TOMORROW

With the Qualstar XLS library, the University of Delaware was able to consolidate its four backup systems onto one machine. "The result," says Rau "has been tremendous improvements on several fronts." For example, the use of the LTO drives has eliminated the performance and maintenance problems that UD experienced with the old system. "We're very happy with them," he says. "They're fast and they're reliable. Before, backups were constantly failing over the weekend and we would need to come in and fix the issue(s). Now, when I come in on Monday mornings, the backups are done and there are no problems."

The increased capacity of the XLS solution also enables the IT group to keep large amounts of backed up data readily available. "We usually like to have several months of data in the library," says Rau. "That way, if someone's system suddenly crashes and they need important data from six weeks ago, we can retrieve it quickly, rather than having to dig it out of [long-term] archives."

What's more, the system is delivering increased performance in a very cost-effective manner. "One of the key benefits is the fact that we are able to consolidate storage onto one system," says Rau. "We had so many footprints with our old libraries—the mainframe library in particular had an enormous footprint. So we are currently freeing up floor space while increasing our data-storage capacity. At the same time, we're lowering our operational costs because we're using much less electricity."

Just as important, the new storage solution provides a significant degree of "future proofing," with its modular approach to scalability. The University is currently using eight tape drives and 435 tape slots on the Qualstar XLS. That gives UD significantly more capacity than it had with its four older libraries combined—and yet leaves a great deal of room for growth. The system can easily be expanded to include up to 96 drives and more than 6,000 tape slots, essentially by simply adding modules. "You can expand it in a very simple, seamless fashion," says Rau, adding, "I really don't think we're

going to run out of room with this solution any time in the near future."

The ability to scale up with relative ease is extremely important in the coming years, as the University of Delaware continues to thrive and generate ever-growing volumes of data.

"We're in the process right now of bringing up a new mail server that has five terabytes of disc space just for users that need large In-Boxes, and of course we'll need to back that up as well," says Rau. "Overall, I would say that on average we're adding about one server a week to our back-ups."

Reliable, sophisticated technology like the Qualstar XLS system is critical for Rau's department. So too is the expertise of a trusted partner, he says. "We've clearly received very useful advice and guidance from OSSI. For instance, I don't know that we would have ever considered the Qualstar system if it weren't for OSSI."

"With ever-evolving technology, it's difficult to keep up on everything," Rau continues. "So we rely on OSSI to keep up on the technology for us—that way we're not spending all of our time researching new solutions. If you find a vendor like Open Systems Solutions, Inc., where you trust their judgment and opinion, you can work with them to identify the problems you need solved and come up with solid solutions." In the end, that translates into the University of Delaware's IT professionals being able to focus on their job – supporting and enabling the free exchange of information that is the lifeblood of the University.

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